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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,660	09/06/2001	Richard B. Gayle III	P23,495 USA	2232

7590 06/24/2005

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EXAMINER

HUYNH, PHUONG N

ART UNIT PAPER NUMBER

1644

DATE MAILED: 06/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/807,660

**Applicant(s)**

GAYLE III ET AL.

**Examiner**

Phuong Huynh

**Art Unit**

1644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE One MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 4/16/01.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 19-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-7 and 19-41 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

I. Claims 1-7 and 19-41 are pending.

#### *Election/Restrictions*

II. Restriction to one of the following inventions is required under 35 U.S.C. 121 and 372:

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1:

1. Claims 1-4, 20, 22, 24, 26, 28, 30, 32, 33, 35-36, 38 and 40, drawn to a method for inhibiting platelet activation and recruitment in a mammal by administering a soluble CD39 polypeptide having X-Y wherein X is Ala or mature IL-2 capable of adopting a stable secondary structure and Y is a polypeptide having an amino acid sequence as set forth in SEQ ID NO: 2, fragment or variant thereof.
2. Claims 5-6, 21, 23, 25, 27, 29, 31, 34, 37, 39, and 41, drawn to a method for inhibiting platelet activation and recruitment in a mammal by administering a soluble CD39 polypeptide or fusion polypeptide of SEQ ID NO: 6.
3. Claims 5-6, 21, 23, 25, 27, 29, 31, 34, 37, 39, and 41, drawn to a method for inhibiting platelet activation and recruitment in a mammal by administering a soluble CD39 polypeptide or fusion polypeptide of amino acids 27-473 of SEQ ID NO: 29.
4. Claims 5-6, 21, 23, 25, 27, 29, 31, 34, 37, 39, and 41, drawn to a method for inhibiting platelet activation and recruitment in a mammal by administering a soluble CD39 polypeptide or fusion polypeptide of amino acids 21-476 of SEQ ID NO: 3.
5. Claims 5-6, 21, 23, 25, 27, 29, 31, 34, 37, 39, and 41, drawn to a method for inhibiting platelet activation and recruitment in a mammal by administering a soluble CD39 polypeptide or fusion polypeptide of amino acids 21-476 of SEQ ID NO: 4.

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6. Claims 5-6, 21, 23, 25, 27, 29, 31, 34, 37, 39, and 41, drawn to a method for inhibiting platelet activation and recruitment in a mammal by administering a soluble CD39 polypeptide or fusion polypeptide of amino acids 25-464 of SEQ ID NO: 27.
7. Claims 5-6, 21, 23, 25, 27, 29, 31, 34, 37, 39, and 41, drawn to a method for inhibiting platelet activation and recruitment in a mammal by administering a soluble CD39 polypeptide or fusion polypeptide of amino acids 25-474 of SEQ ID NO: 28.
8. Claims 5-7, 21, 23, 25, 27, 29, 31, 34, 37, 39, and 41, drawn to a method for inhibiting platelet activation and recruitment in a mammal by administering a soluble CD39 polypeptide or fusion polypeptide of amino acids 21-463 of SEQ ID NO: 30.
9. Claim 19, drawn to a method for degrading nucleoside tri and/or di-phosphate.

The invention listed as Group 1 does not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Gayle et al teach a method for inhibiting platelet activation and recruitment in a mammal such as mice by administering a soluble CD39 polypeptide having a structure X-Y wherein X is the N terminal portion of mature IL-2 and Y is a human CD39 which is a variant of claimed SEQ ID NO: 2 (see page 1852, col. 1, Methods, Fig. 1, soluble CD39, page 1857, col. 1, persistence of sol CD39 after in vivo administration, in particular).

Since Applicant's inventions do not contribute a special technical feature when viewed over the prior art they do not have single general inventive concept and lack unity of invention.

- III. Accordingly, Groups 1-9 are not so linked as to form a single general inventive concept and restriction is proper.
- IV. Applicant is advised that the response to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed.

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- V. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).
- VI. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Huynh "NEON" whose telephone number is (571) 272-0846. The examiner can normally be reached Monday through Friday from 9:00 am to 5:30 p.m. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on (571) 272-0841. The IFW official Fax number is (571) 273-8300.
- VII. Any information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phuong N. Huynh, Ph.D.

Patent Examiner

Technology Center 1600

June 10, 2005

  
CHRISTINA CHAN  
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